

Status and Plans for EED

PPD Engineering Customers Meeting

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DZero

- AFEIt
- Level 1 Calorimeter Trigger
- Layer Zero electronics
- Level 1 Muon electronics
- Luminosity Monitor electronics
- General Support

AFEII-t

- Paul Rubinov, Tom Fitzpatrick, Kwame Bowie, Patrick Liston, Johnny Green, Zonghan Shi, Bob DeMaat
- Boards are in production
- Will begin testing in 2nd week of June (with much help from collaborators)
- Milestone of 203 tested is scheduled for mid August

DZero Support

- John Foglesong, Mike Cherry, Josua Moua, Victor Martinez
- Additional effort provided by Mike Matulik, Linda Bagby, Mike Utes, Jamieson Olsen, Johnny Green, Bruce Merkel

D0 Level 1 Calorimeter Trigger

- Removed old system
- Installed new system
- Connected all cables
- Obtained an ORC
- Checked system for proper operation
- Repaired bad cables
- Now providing general support

D0 Layer 0 Electronics

- Installed two new high voltage crates and power
- Installed filters for power to adapter cards
- Wired up power from filters to new adapter cards
- Obtained an ORC
- Checked out system for proper operation
- Repaired bad cables
- Now providing general support

D0 Level 1 Muon

- Modified all operational power supplies with connectors
- Modified all spare power supplies with connectors
- Obtained an ORC
- Checked for proper operation
- Now providing general support

D0 Luminosity Monitor

- Modified power supply to separate North and South ends of the detector
- Provided support as needed
- Now providing general support

General work for D0

- Repaired bad FPD power supplies
- Repaired all bad BLS power supplies and spares
- Did final upgrade to last BLS power supply
- Need to repair one PreAmp power supply on Monday
- Repairing and helping with problems to return the Detector to fully operational status.

D0 AFE maintenance

- Mike Matulik
- Ongoing work as time is available

CDF Electronics Support

- Along with MD CDF Ops people, Roberto Davila and George Wyatt worked on:
- VRB Readout 1st floor counting room.
Totally reconfigured the layout of the VRB electronics and cooling system.
Reconfigured from 2 crates and 2 power supplies in 3 relay racks to 3 crates per one power in each of 4 relay racks

CDF Electronics Support (cont.)

- Debugging CAEN HV Systems along with
- Maintaining Alacrity Power Supplies- Fan replacement
- Parts research & purchase for various shutdown activities
- Debugging Power supply Monitoring System on IFix

CDF Electronics Support (cont.)

- Replacing and repairing VME J3 Backplanes
- Installed 256 XFT fiber cables from counting room to CDF collision hall
- Installed Muon Spare HV cables from 1st floor counting room to CDF collision hall
- Refurbished Fan packs

CDF Electronics Support (cont.)

- Battery replacement for UPS systems
- Removal & replacement of cooling fans in all CAEN HV Crates. (With help from Albert Dyer, and PREP Technicians)
- Recertified all the Gas Systems
- One week cleaning the entire CDF building

CDF Electronics ongoing work

- Install some tubing for HALON Sampling System
- SMD Crate Filter Replacement
- Relay rack filter replacement at different locations in CDFD collision hall
- Fan replacement (3) on Trigger room.
- COT electronics fan pack replacement

CDF Run IIb Electronics

- XFT Stereo Finder module
 - Scott Holm
 - Installed. Expect additional firmware versions
- SVT Hit Buffer implementation of Pulsar
 - Steve Chappa (with collaborators)
 - Installed. Expect additional Pulsar work

ASIC chips

- DCal
 - Abder Mekkaoui, Jim Hoff
 - July 23 submission date
- 3D circuit design
 - Abder Mekkaoui, Jim Hoff, Tom Zimmerman
 - Submit in October
- Monolithic Active Pixel readout
 - May be part of 3D design

ASIC chips (cont)

- 3D Detector design
 - Alpena Shenai (with Dave Christian and Ron Lipton)
- APD Readout chip for NOvA
 - Tom Zimmerman
 - Being tested now

ASIC Testing

- William Wester, Cristian Gingu, Alan Baumbaugh, Boris Baldin, Kelly Knickerbocker, Lou DalMonte
- CMS Forward Pixels Read Out Chip
- QIE chips for CMS
- MINERvA Trip-t chips
- NOvA APD readout chip
- Complete a second automated tester
- Upgrade the tester processor card

CMS Forward Pixels

- Mike Matulik, Boris Baldin, Cristian Gingu, Lou DalMonte
 - HDI_4LX artwork ready for fabrication
 - Next HDI being laid out
- Burn-in box
 - 2 of three boards have been fabbed
 - 3rd is being laid out

DES Electronics

- Terri Shaw, Walter Stuermer, Mark Kozlovsky, Dave Huffman, Jamieson Olsen, Merle Watson
- 12-channel DAQ board
 - Prototype out for fabrication
- DAQ transition card
 - Board being laid out

DES Electronics (cont)

- Clock Board
 - Being specified
- Vacuum interface board
 - Being laid out

SNAP

- Flash Memory Radiation Study
 - William Wester, Rod Klein, , Xinyi Chen
 - 3 months to finish DAQ, perform radiation study and write-up results
- FRIC0 chip
 - Abder Mekkaoui, Jim Hoff
 - 2 months to receive prototype chip back, make tests and measurements
- Slice Board daughter card
 - Xinyi Chen, William Wester
 - 3 months for PCB schematic of 4-channel board

Accelerator Division work

- Beam Damper Board
 - Marcus Larwill
 - 3 prototypes are installed
 - Design mods have been made
 - New layout is in progress

Beam Loss Monitor upgrade

- Alan Baumbaugh, Jinyuan Wu, Mike Utes, Lou DalMonte, Kelly Knickerbocker, Zonghan Shi, Albert Dyer, Wayne Johnson
- Expect to finish in early August
- Testing of 200 Digitizer boards has begun
- Testing of 40 Abort boards is in progress
- Testing of 48 Timing boards is in progress
- Testing of 40 Controller boards to begin in 2 weeks
- 66 Filter Chassis are complete and being installed

Accelerator Division work (cont)

- Ionization Profile Monitor
 - Kwame Bowie
 - Boards are being tested
- PBar Low Level RF
 - Sten Hansen, Terry Kiper
 - BPM Readout cards
 - 22 installed, 35 more will be made
 - Cavity Driver cards
 - 3 Phase-hop versions are installed

Accelerator Division work (cont)

- Liquid Level Sensor
 - Sten Hansen, Terry Kiper
 - Fully installed
 - Additional spares are being checked out

Cold Dark Matter Search

- Prototype front end board
 - Sten Hansen, Terry Kiper
 - 5 prototypes are due next week